UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,334	01/28/2004	Michael Ching	RAMB-01050US0	3273

7590 12/28/2005	EXAMINER
kirk J. DeNiro, Esq.	NGUYEN, BRIAN D

ART UNIT	PAPER NUMBER
2661	

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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/766,334	CHING ET AL.
		Examiner	Art Unit
		Brian D. Nguyen	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>28 January 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-62</u> is/are pending in the application.

   4a) Of the above claim(s) <u>47-49 and 57-62</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2,5,6,10-16,23-28,30-46 and 50-56</u> is/are rejected.

7)☒ Claim(s) <u>3,4,7-9,17-22 and 29</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>11/12/04</u>.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   During a telephone conversation with Kirk DeNiro on 12/22/05 a provisional election

was made without traverse to prosecute the invention of an integrated circuit, claims 1-46 and

50-56. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 47-49 and 57-62 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the

inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

currently named inventors is no longer an inventor of at least one claim remaining in the

application. Any amendment of inventorship must be accompanied by a request under 37 CFR

1.48(b) and by the fee required under 37 CFR 1.17(i).

2.   Note: The terms: "capable of" is not positively recited limitation. Therefore, the

limitations followed this term are not considered the claimed limitations. If the applicant would

like to claim the limitations; it is suggested that the applicant delete this term from claims 1, 2,

21, 22, 31, 37, 38, 43-46, 50, and 51.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 2, 43, 44, and 50-56 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lattimore (6,243,776).

Regarding claim 1, Lattimore discloses an integrated circuit (figure 4) comprising: an

interface including a first contact coupled to a first transceiver (the line connected to the

transceiver 152/188) and a second contact coupled to a second transceiver (see col. 3, lines 38-39

where Lattimore teaches that for a 64-bit bus, the circuit is repeated 64 times. Therefore, the

second transceiver is in one of the repeated circuits); wherein the integrated circuit is operable in

a first mode and a second mode (see col. 3, lines 20-28 where Lattimore teaches that the driver,

receiver, and driver/receiver are selectable to operate in uni-directional and bi-directional

modes). Lattimore does not specifically disclose during the first mode of operation, the first

transceiver is capable of transmitting and receiving signals and the second transceiver is capable

of transmitting and receiving signals and during the second mode of operation, the first

transceiver is capable of only transmitting signals and the second transceiver is capable of only

receiving. However, to configure the first mode and the second mode as claimed is a matter of

choice because the driver, receiver, and driver/receiver in the system of Lattimore are

configurable. Therefore, it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to configure the first and the second modes as claimed to meet the

design criteria of a particular implementation.

Regarding claim 2, Lattimore discloses a control logic, coupled to the integrated circuit,

is capable of generating a control signal and wherein the integrated circuit operates in the first

mode of operation responsive to the control signal (see control signal ENABLE_A_TO_B in

figure 4).

Regarding claim 43, Lattimore discloses a circuit comprising: an interface having a

plurality of contacts including a first set of contacts (see figure 4) and a second set of contacts

(see col. 3, lines 38-39 where Lattimore teaches that for a 64-bit bus, the circuit is repeated 64

times. Therefore, the second transceiver is in one of the repeated circuits), and, control logic,

coupled to the interface (a control logic that generates the ENABLE signal), capable of

configuring the contacts to transmit and receive. Lattimore does not explicitly disclose

configuring the first set of contacts to transmit and the second set of contacts to receive.

However, to configure the first set of contacts to transmit and the second set of contacts to

receive is a matter of choice because the driver, receiver, and driver/receiver in the system of

Lattimore are configurable. Therefore, it would have been obvious to a person of ordinary skill

in the art at the time the invention was made to configure the first and the second set of contacts

as claimed to meet the design criteria of a particular implementation.

Regarding claim 44, the third set of contacts is another repeated contacts as shown in

figure 4 and the motivation for configuring the third asset of contacts is the same as the

motivation for configuring the first and second set of contacts.

Regarding claim 50, claim 50 includes a first integrated circuit, which is the same as the

circuit described in claim 1 and the second integrated circuit is the circuit shown on the right side

of figure 4. Therefore, it is subject to the same rejection.

Regarding claim 51, Lattimore discloses in figure 1 a plurality of integrated circuits

(processor, RAM, ROM, adapter...) connected to each other via a bus 12. The third circuit as

claimed is one of these integrated circuits. The content and the configuration of the third

integrated circuit is described in previous paragraph. Therefore, it is subject to the same

rejection.

Regarding claims 52-56, as shown in figure 1, printer, processor, computer, graphic card

(display adapter) are connected to the bus. Other circuits such as video game console can also be

connected to the bus.

5.   Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore

(6,243,776) in view of Moy (2003/0158994).

Regarding claims 5-6, Lattimore does not specifically disclose the control signal is

generated in response to a user selectable setting at initialization or during normal operating

mode. However, Moy discloses a user can enter specified state command during initialization or

during operations (see paragraph 0022). Therefore, it would have been obvious to a person of

ordinary skill in the art at the time the invention was made to have a user setting at initialization

and during operation as taught by Moy in the system of Lattimore in order to give the operator

more control of the system operation.

6.   Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore

(6,243,776) in view of Ogilvie et al (2005/0080942).

Regarding claims 10-14, Lattimore does not specifically disclose the control logic is

included in another integrated circuit and the control logic has information regarding bandwidth

requirement, executable instruction, application software program, operating software program.

However, Ogilvie discloses a microcontroller 118 (control logic) has information regarding

bandwidth requirement (bandwidth allocation) and executable software program (see figure 1

and paragraph 0032). Therefore, it would have been obvious to a person of ordinary skill in the

art at the time the invention was made to include the control logic as taught by Ogilvie in the system of Lattimore in order to allocate the bandwidth to the system when needed.

7.　　Claims 15-16, 25-28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore (6,243,776) in view of Leger et al (5,771,356).

Regarding claims 15-16, Lattimore does not specifically disclose the control signal is generated in response to a number of data packets waiting to be transmitted or waiting to be received. However, Leger discloses monitor and compare the number of packets in the buffer with a threshold and issue a control signal in response to the number of packets in the buffer exceed the threshold (see col. 3, lines 1-13). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate a control signal in response to a number of data packet waiting to be transmitted or received as taught by Leger in the system of Lattimore in order to, for example, prevent system overflow.

Regarding claims 25-28 and 30, Lattimore does not specifically disclose the use of a threshold in order to compare the measured value with the threshold to control or reconfigure the system when needed. However, Leger discloses the use of a threshold (see threshold in the abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a threshold as taught by Leger in the system of Lattimore to set limit for bandwidth, temperature, power consumption, latency in order to meet the design criteria of a particular implementation.

8.　　Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore (6,243,776) in view of Ledbetter et al (5,485,602).

Regarding claim 23, Lattimore does not specifically disclose the control signal is generated periodically. However, Ledbetter discloses that control signal can be generated periodically or no periodically (see claim 5). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate the control signal periodically as taught by Ledbetter in the system of Lattimore in order to periodically update system parameters.

9.   Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore (6,243,776) in view of Amini et al (5,265,211).

Regarding claim 24, Lattimore does not specifically disclose the control logic generates a control signal in response to an override signal. However, Amini discloses the use of an override signal (see col. 3, lines 61-65). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the override signal as taught by Amini in the system of Lattimore in order to override other information when needed.

10.   Claims 31-41, 45, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore (6,243,776) in view of Sessions (6,606,576).

Regarding claims 31-33 and 37-40, Lattimore does not specifically disclose a third mode in which the second transceiver is disabled and a phase and impedance calibration are performed. However, disabling a channel and perform calibration on that channel is well known in the art. Sessions discloses disabling a channel and performs calibration on that channel (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to perform the calibration as taught by Sessions in the system of Lattimore in order to adjust the system when needed.

Regarding claims 34-36, Lattimore does not specifically disclose disable the second transceiver when failure is detected. However, it is obvious that a failure transceiver should be disabled. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to disable the second transceiver in order to avoid routing data packets to a failure transceiver.

Regarding claim 41, Lattimore discloses the control signal is an enable signal (see enable signal in figure 4).

Regarding claim 45, Lattimore discloses a third set of contacts can be added as described in previous paragraph. Lattimore does not specifically the third set of contacts is disabled. However, Sessions discloses a channel can be disabled for calibration (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to disable the third set of contacts so that the third set of contacts can be calibrated in order to ensure that the third set of contacts are operating properly.

Regarding claim 46, Lattimore discloses the first set of contacts as shown in figure 4 and additional set of contacts including second, third, and forth set of contacts and configure each set of contacts as described in previous paragraph. Lattimore does not specifically discloses the forth set of contacts is disabled. However, Sessions discloses a channel can be disabled for calibration (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to disable the third set of contacts so that the third set of contacts can be calibrated in order to ensure that the third set of contacts are operating properly.

11.   Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lattimore (6,243,776) in view of Craft et al (2004/0054830).

Regarding claim 42, Lattimore does not specifically disclose the deserializer and the serializer. However, Craft discloses this feature (see 120, 150, 160 in figure 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the serializer and deserializer as taught by Craft in the system of Lattimore in order to convert between serial and parallel data transmission.

Allowable Subject Matter

12.   Claims 3, 4, 7-9, 17-22, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
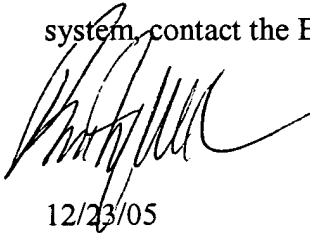
Krishnamurthy et al (6,181,166), Robbins et al (6,457,089), and Arimilli et al (6,725,304).

14.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/23/05

BRIAN NGUYEN
PRIMARY EXAMINER